Amendments to the Claims:

1. (Currently Amended) A method of DC compensation for a direct conversion radio receiver having an effective filter characteristic representing its frequency response, comprising:

applying an inverse filter characteristic to a received modulated signal over a predetermined number of samples to compensate for the effect of the effective filter characteristic;

determining the modulation extremes of the filtered signal by determining minimum and maximum signal amplitudes over the predetermined number of samples; and

determining a DC offset for the signal from the modulation extremes; and processing the signal to compensate for the offset.

2. (Original) A method according to claim 1, comprising determining the DC offset as substantially the mean of the signal amplitude at the modulation extremes.

3. (Original) A method according to claim 1, wherein the step of processing the signal comprises subtracting the offset from the signal.

4. (Original) A method according to claim 1, wherein the step of processing the signal comprises subtracting a weighted exponential function from the signal.

5. (Original) A method according to claim 4, wherein the weighting of the exponential function comprises the determined DC offset.

6. Cancelled

7. Cancelled

8. (Original) A method according to claim 1, wherein the signal comprises an in-phase component of a modulated signal.

9. (Original) A method according to claim 1, wherein the signal comprises a quadrature component Q of a modulated signal.

10. (Original) A method according to claim 1, wherein the signal is GMSK modulated.

11. (Original) A computer program which, when run on a processor, carries out the steps of claim 1.

12. (Currently Amended) A direct conversion receiver having an effective filter characteristic representing its frequency response comprising:

inverse filter means for applying an inverse filter characteristic to a received modulated signal over a predetermined number of samples to compensate for the effective filter characteristic;

means for determining the modulation extremes of the filtered signal by determining minimum and maximum signal amplitudes over the predetermined number of samples;

means for determining a DC offset for the signal from the modulation extremes; and

means for processing the signal to compensate for the offset.

13. Cancelled

14. (Currently Amended) A program to be executed by a digital signal processor in a direct conversion receiver having an effective filter characteristic representing its frequency response, the receiver comprising an inverse filter circuit for applying an inverse filter characteristic to a received modulated signal over a predetermined number of samples to compensate for the effect of the effective filter characteristic, a mixer circuit for providing quadrature related signals from the signal, a DC cancellation circuit for cancelling the DC component in the quadrature related signals and a digital signal processor for removing a residual DC component from the signals, said program being configured to cause the digital signal processor to determine the modulation extremes of the signals by determining minimum and maximum signal amplitudes over the predetermined number of samples, to calculate a DC offset for the signals from the modulation extremes and to process the signals to compensate for the DC offset.

15. (Currently Amended) A direct conversion radio receiver having an effective filter characteristic representing its frequency response including a digital signal processor for processing a received modulated signal, the digital signal processor being configured to apply an inverse filter characteristic over a predetermined number of samples to compensate for the effect of the effective filter characteristic, determine the modulation extremes of the filtered signal by determining minimum and maximum signal amplitudes over the predetermined number of samples, determine a DC offset for the signal from the modulation extremes and to process the signal to compensate for the offset.

16. (New) A method according to claim 1, wherein the effective filter characteristic of the radio receiver is a high pass filter characteristic.

17. (New) A method of DC compensation for a direct conversion radio receiver

having a high pass filter characteristic representing its frequency response, comprising:

applying an inverse filter characteristic to a digitized received modulated signal to compensate for the effect of the high pass filter characteristic;

determining a DC offset of the signal from the modulation extremes; and

processing the signal to compensate for the offset.

18. (New) A method according to claim 17, wherein the high pass filter characteristic is caused by at least one analog DC cancellation circuit.

19. (New) A direct conversion radio receiver having a high pass filter characteristic representing its frequency response including a digital signal processor for processing a received modulated signal, the digital signal processor being configured to apply an inverse filter characteristic to compensate for the effect of the high pass filter characteristic, determine the modulation extremes of the filtered signal, determine a DC offset for the signal from the modulation extremes and to process the signal to compensate for the offset.

20. (New) A direct conversion radio receiver according to claim 19, comprising at least one analog DC cancellation circuit, wherein the at least one DC cancellation circuit has a high pass filter characteristic.